

Academicians Directory

INTERNATIONAL EURASIAN ACADEMY OF SCIENCES
(IEAS)

European Center



EUROPEAN
CENTRE



IEAS President Bondur and IEAS Vice President Markku Kulmala at the opening of the European Center in Helsinki

The European Center of International Eurasian Academy of Sciences (IEAS) and its Headquarters (HQ) was established at Masaryk University, Czech Republic and lead by Professor Milan Konecny. Starting from October 2012 the IEAS European Center is located in Finland - at the former Faculty of Atmospheric Research, now the Institute for Atmospheric and Earth System Research (INAR), University of Helsinki. The Center is lead by Academician, Professor Markku Kulmala. IEAS-Europe represents an interdisciplinary research platform involving leading scholars from European countries. Current activities of IEAS-Europe focus on facilitating the dialogue between different disciplines to find solutions on Grand Challenges with emphases on the climate change and global pollution in Eurasian region by organizing the Sofia Earth Forum(s) and other events bridging exact science, humanities practical applications and decision making.

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First group of newly elected IEAS members belonging to the new European Center in Helsinki: Prof. Markku Kulmala, Prof. Alexander Baklanov, Prof. Yrjö Viisanen, Dr. Igor Esau and Prof. Tuukka Petäjä. October 2012, Photo by H.K. Lappalainen

I. Foreword

Earth's system is facing several interlinked environmental challenges on a global scale, called "Grand Challenges". The growing population needs more fresh water, food and energy. These increasing needs have already led us to face climate change, declining air quality, acidification, loss of biodiversity and shortages of fresh water and food supplies. The Grand Challenges are the main factors controlling human well-being and the security and stability of future societies, and they cannot be solved separately. We need a common framework, in which scientists are able to deliver a science-based message being legitimated to fast-track policy making.

International Eurasian Academy (IEAS) European Center is network of Academicians aiming to go over different boundaries and to find joint understanding and practical solutions on Grand Challenges. The IEAS – European Center is especially interested in Eurasian environments, including boreal and arctic environments and their large-scale feedbacks and interactions. Our mission is to foster joint efforts towards sustainable development of societies and towards multi- and cross-disciplinary education.

We also address the crucial role of science diplomacy for making impact in different policy making forums. Thus, the IEAS-Europe will act as an interdisciplinary dialog platform involving leading scholars from European countries. IEAS-Europe Academicians are mostly representing atmospheric and environmental sciences with an increasing number of academicians coming from socio-economics and the humanities.

Academician, Professor Markku Kulmala
President of the International Eurasian
Academy of Sciences (IEAS) European Center

2. Introduction

IEAS is a public organisation bringing together scientists, scholars and prominent actors in culture, art and social life. It involves over 500 members from 87 countries whose professional interests focus on or relate to modern challenges faced by the humankind in social development, global economy and environment protection. Functioning of IEAS is guided by principles of independence, equal rights, self-governing and legitimacy. Its priorities are: leading research and development focusing on specific problems faced by Eurasian countries.

IEAS initiates and promotes efforts towards solution of vital problems faced by Eurasian countries in the areas of environmental protection, global energy, quality of environment, and social development; promotes initiatives, institutions and groups in solving global problems posed by uncontrolled technological developments; searches for constructive ways towards transition to sustainable development in social, economic and ethical spheres unifying creative potential of science, culture and arts. The core of IEAS' activities comprises international basic-science and applied studies, advancing the content and methodology of supervision, and implementation of new results in practice.

Specific mission of the Europe-Center of IEAS specific mission is to build a bridge between national science programs and international science communities towards coordination of research, development and education in a way beneficial for Northern Eurasia. The Center has become an important instrument for coordination and collaboration, particularly, via research-development-education program Pan-Eurasian Experiment (PEEX) launched in 2013 and involving European countries, Russia, China and Japan.

Major activities

- Continuous comprehensive observations, theory and modelling of air, water and soil pollution and their impact on human health and quality of life
- Methodology and technology of remote sensing environmental observations
- Theory, modelling and forecasting of natural and anthropogenic processes forming the humankind's environment
- Geo-informatics inspired by the environmental Grand Challenges, new knowledge of Earth systems and recent technological developments
- Power-saving and science-intensive technologies

Milestones

1. 1994, Minsk, Belorussia: International Eurasian Academy of Sciences (IEAS) is founded as a bottom-up initiative of scientists from several European and Asian countries
2. 1996, Moscow, Russia: the IEAS General Assembly identifies its mission, main goals and priorities.
3. 1997, Beijing, China: IEAS General Assembly announces the IEAS particularly goals:
 - Facilitating application of energy-efficient and science-driven technologies
 - Designing / implementing new methods and systems for environmental observations
 - Forecasting and preventing dangerous natural and manmade disasters
 - Assessing environmental and human-health risks and damages caused by manmade impacts
4. Since then, IEAS comprises its infrastructure:
 - the IEAS Headquarters (HQ) is based at the location of the IEAS President;
 - Three IEAS Centers, built on the territorial principle:
 - Euro-Asian Center in Moscow (Russia);
 - Asia-Pacific Center in Beijing (China);
 - European Center in Helsinki.
5. 2012, resolution about European Center in Helsinki, hosted by INAR, University of Helsinki, Finland, and chaired by Vice President of IEAS Academician Markku Kulmala



Alexander H. Alexandrov

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BULGARIA

Chairman, Publishing
Council of the Bulgarian
Academy of Sciences

Date of election: 18 May 1996

Scientific Field

Forestry, Ecology, Forest Genetics, Phytogeography

No. of articles.....491

Total citations.....1,200

Major 5 Publications

1. Penev, N., A. Georgiev, A. Alexandrov, Ch. Garilov, D. Dimitrov. 1982. Formation of high-productive forest stands. Publishing house of BAS, 400 p.
2. Alexandrov, A., G. Rafailov, G. Nedelin, K. Tsanov, B. Bogdanov, S. Spassov. 1988. Coniferous forest in Bulgaria. Zemizdat, 152 p.
3. Alexandrov, A. 1990. Genetics and breeding of forest tree species. Zemizdat, 142 p.
4. Alexandrov, A. 1996, 1988, 2002. Aesculus hippocastanum L.; Pinus peuce Grisb.; Acer heldreichii Orph. - Enzyklopadie der Holzgewachse, 6, 14, 34. Ecomed, Landsberg,
5. Alexandrov, A., R. Dobrev. 2015. The state of forest genetic resources in Bulgaria. Scholar's Press, 85 p.

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Prof. Dr. h.c.
GERMANY

Director Emeritus,
Biogeochemistry
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Institute for Chemistry

Date of election: 30 June 2015

Scientific Field

Biogeochemistry and Atmospheric Research

Researcher ID: B-1068-2008

ORCID ID: 0000-0003-1968-7925

ISI Web of Science 2 June 2020

No. of articles..... 556

H index..... 110

Total citations..... 50,454

No. of Nature and

Science papers..... 33

Major 5 Publications

1. Charlson, R. J., Lovelock, J. E., Andreae, M. O., and Warren, S. G., Oceanic phytoplankton, atmospheric sulphur, cloud albedo, and climate: *Nature*, 326, 655-661, 1987.
2. Rosenfeld, D., Lohmann, U., Raga, G. B., O'Dowd, C. D., Kulmala, M., Fuzzi, S., Reissell, A., and Andreae, M. O., Flood or drought: How do aerosols affect precipitation?: *Science*, 321, 1309-1313, 2008.
3. Andreae, M. O., Rosenfeld, D., Artaxo, P., Costa, A. A., Frank, G. P., Longo, K. M., and Silva-Dias, M. A. F., Smoking rain clouds over the Amazon: *Science*, 303, 1337-1342, 2004.
4. Andreae, M. O., and Gelencsér, A., Black carbon or brown carbon? The nature of light-absorbing carbonaceous aerosols: *Atmos. Chem. Phys.*, 6, 3131-3148, 2006.
5. Andreae, M. O., Emission of trace gases and aerosols from biomass burning – an updated assessment: *Atmos. Chem. Phys.*, 19, 8523-8546, doi:10.5194/acp-19-8523-2019, 2019.

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Date of election: 23 June 2015

Scientific Field

Land-Atmosphere Interactions

Researcher ID: B-2702-2013

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ISI Web of Science 27 April 2020

No. of articles..... 206

H index..... 62

Total citations..... 14,979

No. of Nature and
Science papers..... 4

Major 5 Publications

1. Brown, C., Alexander, P., Arneth, A., Holman, I. P., Rounsevell, M. Achieving the Paris climate goals is challenged by time lags in the land system. *Nature Climate Change*, DOI: 10.1038/s41558-019-0400-5
2. Henry, R. C., Alexander, P., Rabin, S., Anthoni, P., Rounsevell, M. D. A., Arneth, A. (2019) The role of global dietary transitions for safeguarding biodiversity. *Global Environmental Change-Human and Policy Dimensions*, DOI:10.1016/j.gloenvcha.2019.101956
3. Arneth A, et al. (2017) Historical carbon dioxide emissions caused by land-use changes are possibly larger than assumed. *Nature Geoscience* 10: 79-+. DOI: 10.1038/ngeo2882
4. Arneth A, et al. (2010) Terrestrial biogeochemical feedbacks in the climate system. *Nature Geoscience* 3: 525-532. DOI: 10.1038/ngeo905
5. Arneth A, Brown C, Rounsevell MDA (2014) Global models of human decision-making for land-based mitigation and adaptation assessment. *Nature Climate Change* 4: 550-557. DOI: 10.1038/nclimate2250



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Date of election: 8 November 2017

Scientific Field

Atmospheric Chemistry; Air Quality; Atmospheric Chemistry - Earth
System Interactions; Arctic Air Pollution

Researcher ID: B-2702-2013

ORCID ID:

ISI Web of Science 19 June 2020

No. of articles..... 79

H index..... 30

Total citations..... 2,622

No. of Nature and

Science papers..... 4

Major 5 Publications

1. Schmale, J., Arnold, S. R., Law, K. S., Thorp, T., Anenberg, S., Simpson, W. R., Mao, J., Pratt, K. A., (2018), Local Arctic air pollution: A neglected but serious problem, *Earth's Future*, 6, DOI:10.1029/2018EF000952.
2. Scott, C. E., Arnold, S.R., Monks, S.A, Asmi, A., Paasonen, P., Spracklen, D.V., (2017), Substantial large-scale feedbacks between natural aerosols and climate, *Nature Geosci.*, DOI:10.1038/s41561-017-0020-5.
3. Arnold, S. R., Emmons, L. K., Monks, S. A., et al., (2015), Biomass burning influence on high-latitude tropospheric ozone and reactive nitrogen in summer 2008: a multi-model analysis based on POLMIP simulations, *Atmos. Chem. Phys.*, 15, 6047-6068, DOI:10.5194/acp-15-6047-2015.
4. Spracklen, D.V., S.R. Arnold and C.M. Taylor, (2012), Observations of increased tropical rainfall preceded by air passage over forests, *Nature*, 489, 282-285, doi:10.1038/nature11390.
5. Arnold, S.R., D. V. Spracklen, J. Williams, et al., (2009), Evaluation of the global oceanic isoprene source and its impacts on marine organic carbon aerosol *Atmos. Chem. Phys.*, 9, 1253-1262.



Irina M. Artemieva

Prof. Dr.
DENMARK

University of
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of Geosciences and
Natural Resources
Management (IGN)

Date of election: 14 September 2017

Scientific Field

Solid Earth Geophysics and Geodynamics

Researcher ID: C-2106-2013

ORCID ID:

ISI Web of Science 27 April 2020

No. of articles..... 69

H index..... 23

Total citations..... 2,351

No. of Nature and
Science papers.....

Major 5 Publications

1. Artemieva IM, Shulgin A: Geodynamics of Anatolia: Lithosphere Thermal Structure and Thickness, TECTONICS, 38, 12, 4465-4487, DOI: 10.1029/2019TC005594, 2019
2. Teknik V, Ghods A, Thybo H, Artemieva IM: Crustal density structure of the northwestern Iranian Plateau, CANADIAN JOURNAL OF EARTH SCIENCES, 56, 12, SI: 1347-1365, DOI: 10.1139/cjes-2018-0232, 2019
3. Thybo H, Youssof M, Artemieva IM: Southern Africa crustal anisotropy reveals coupled crust-mantle evolution for over 2 billion years, NATURE COMMUNICATIONS, 10, 5445, DOI: 10.1038/s41467-019-13267-2, 2019
4. Shulgin A, Artemieva IM: Thermochemical Heterogeneity and Density of Continental and Oceanic Upper Mantle in the European-North Atlantic Region, JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH, 124, 8, 9280-9312, DOI: 10.1029/2018JB017025 2019
5. Artemieva IM, Shulgin A: Making and altering the crust: A global perspective on crustal structure and evolution, EARTH AND PLANETARY SCIENCE LETTERS, 512, 8-16, DOI: 10.1016/j.epsl.2019.01.033, 2019

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Institute of Atmospheric
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Research (INAR) at the
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Date of election: 11 April 2019

Scientific Field

Ecosystem Atmosphere Interactions

Researcher ID: A-7405-2010

ORCID ID: 0000-0002-6107-667X

ISI Web of Science 15 May 2020

No. of articles..... 108

H index..... 27

Total citations..... 2,991

No. of Nature and

Science papers..... 1

Major 5 Publications

1. Kourtchev I, Giorio C, Manninen A, et al: Warmer climate enhances oligomer content in ambient organic aerosol and CCN concentration. - Scientific Reports 6, 35038, DOI:10.1038/srep35038, 2016
2. Macháčová K, Bäck J, Vanhatalo A, et al: Pinus sylvestris as missing source of methane and nitrous oxide in boreal upland forest. - Scientific Reports 6:23410, DOI:10.1038/srep23410, 2016
3. Hari P, Petäjä T, Bäck, J, et al: Conceptual design of a measurement network of the global change. - Atmos. Chem. Phys., 16, 1017–1028, DOI:10.5194/acp-16-1017-2016, 2016
4. Aalto J, Kolari P, Hari P, et al: New foliage growth is a significant, unaccounted source for volatiles in boreal evergreen forests. - Biogeosciences 11: 1331–1344, 2014
5. Kulmala M, Kontkanen J, Junninen H, et al: Direct observations of atmospheric nucleation. - Science 339, 943–946, DOI: 10.1126/science.1227385, 2013

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Alexander Baklanov

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Scientific Officer of
Science and Innovation
Department, World
Meteorological
Organization (WMO)
Affiliated Professor, Niels
Bohr Institute of the
University of Copenhagen
Editor-in-chief of Urban
Climate journal

Date of election: 15 November 2017

Scientific Field

Environmental Science, Meteorology, Atmospheric Physics, Urban Geosciences, Climate Change, Risk Assessment, Mathematical Modelling, Sustainable Development

Researcher ID:

ORCID ID: 0000-0002-5396-8440

Google Scholar / ResearchGate (20 May 2020)

No. of articles..... 147 /

H index..... 45 / 40

Total citations..... 8,407 / 6,690

i10-index..... 135

No. of Nature and

Science papers.....

Major 5 Publications

1. Baklanov, A., C.S.B. Grimmond, D. Carlson, et al., 2018: From urban meteorology, climate and environment research to integrated city services. Urban Climate, 23 330–341, DOI:10.1016/j.uclim.2017.05.004.
2. Baklanov, A., D. Brunner, G. Carmichael, et al., 2018: Key issues for seamless integrated chemistry-meteorology modeling. Bull. Amer. Meteor. Soc. DOI:10.1175/BAMS-D-15-00166.1.
3. Baklanov, A., Korsholm, U. S., Nuterman, R., et al., 2017: The Enviro-HIRLAM online integrated meteorology–chemistry modelling system: strategy, methodology, developments, and applications (v. 7.2), Geosci. Model Dev., 10, 2971–2999, DOI:10.5194/gmd-10-2971-2017.
4. Baklanov, A., L.T. Molina, M. Gauss, 2016: Megacities, air quality and climate. Atmospheric Environment, 126: 235–249. DOI:10.1016/j.atmosenv.2015.11.059
5. Baklanov, A., Schlünzen, K., Suppan, P., et al., 2014: Online coupled regional meteorology chemistry models in Europe: current status and prospects, Atmos. Chem. Phys. 14, 317–398, DOI:10.5194/acp-14-317-2014

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Jerzy Bartminski

Professor
POLAND

Prof. Emeritus,
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University (UMCS)/
Instytut Sławistyki PAN

Date of election: 1994

Scientific Field
Slavic Ethnolinguistics

Researcher ID:
ORCID ID:

ISI Web of Science 3 June 2020
No. of articles..... 520
H index..... 34
Total citations..... 4612
No. of Nature and
Science papers..... 12

Major 5 Publications

1. Bartminski J: Jazykovej obraz mira: očerki po etnolingvistike 2005;
2. Stereotypy mieszkają w języku. Studia etnolingwistyczne 2007;
Językowe podstawy obrazu świata” 2006;
3. Aspects of Cognitive Ethnolinguistics, London 2009;
4. Tekstologia 2009 (wspólnie z Stanisławą Niebrzegowską-Bartmińską);
5. Jezik – slika – svet. Etnolingvističke studije, Beograd 2011; Jazyk v kontextu kultury, Praha 2016

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Ekaterina Batchvarova

Prof. Dr. Corresponding member of Bulgarian Academy of Sciences

The National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences

Date of election: 15 November 2017

Scientific Field
Atmospheric research

Researcher ID: L-4304-2016
ORCID ID:

ISI Web of Science 9 June 2020
No. of articles..... 82
H index..... 21
Total citations..... 1162
No. of Nature and Science papers.....

Major 5 Publications

1. Batchvarova E,; Gryning SE: Applied-model for the growth of the daytime mixed layer, Boundary-Layer Meteorology, 56, 3, 261-274, DOI: 10.1007/bf00120423, 1991
2. Gryning SE, Batchvarova E: Analytical model for the growth of the coastal internal boundary-layer during onshore flow, Quarterly Journal of the Royal Meteorological Society, 116, 491, 187-203, part: A, 1990
3. Batchvarova E, Gryning SE: An applied-model for the height of the daytime mixed-layer and the entrainment zone, Boundary-Layer Meteorology, 71, 3, 311-323, DOI: 10.1007/bf00713744, 1994
4. Gryning SE, Batchvarova E, Brummer B, Jorgensen H, Larsen S: On the extension of the wind profile over homogeneous terrain beyond the surface boundary layer, Boundary-Layer Meteorology, 124, 2, 251-268, DOI: 10.1007/s10546-007-9166-9, 2007
5. Rotach MW, Vogt R, Bernhoffer C, Batchvarova E, et al: Bubble - an urban boundary layer meteorology project, Theoretical and Applied Climatology, 81, 3-4, 231-261, DOI: 10.1007/s00704-004-0117-9, 2005

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Robert Bornstein

Prof. Dr.
USA

Professor Emeritus of
Meteorology and Climate
Sciences
San Jose State University

Date of election: 2014

Scientific Field

Urban Climate and Air Quality

Researcher ID:

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ISI Web of Science 27 April 2020

No. of articles.....

H index..... 28

Total citations..... 4235

No. of Nature and

Science papers.....

Major 5 Publications

1. Liang XS, Miao S, Li J, Bornstein R, et al: SURF: understanding and modeling urban convection and haze. BAMS, 99, 1391-1413, 2018.
2. Chen F, Kusaka H, Bornstein R, et al: The integrated WRF/urban modelling system: development, evaluation, and applications to urban environmental problems, International Journal of Climatology 31 (2), 273-288, 2011
3. Bornstein R: Observations of the urban heat island effect in New York City, Journal of Applied Meteorology 7 (4), 575-582, 1968
4. Bornstein R, Lin Q: Urban heat islands and summertime convective thunderstorms in Atlanta: three case studies, Atmospheric Environment 34 (3), 507-516, 2000
5. Bornstein R: The two-dimensional URBMET urban boundary layer model, Journal of Applied Meteorology 14 (8), 1459-1477, 1975

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Date of election:

Scientific Field

Researcher ID:

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ISI Web of Science 8 June 2020

No. of articles.....

H index.....

Total citations.....

No. of Nature and
Science papers.....

Major 5 Publications

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Ilia Dimitrov Christov

Academician of New York Academy of Sciences
BULGARIA

Professor Emeritus,
Poushkarov Institute
for Soil Science,
Agrotechnology and Plant
Protection

Date of election: 18 May 1996

Scientific Field

Agroecology, Ecology, Plant Biophysics, Soil Physics, Nuclear Methods in
Soil Science

Researcher ID:

ORCID ID:

ISI Web of Science

No. of articles..... 223

H index.....

Total citations..... 378

No. of Nature and

Science papers.....

Major 5 Publications

1. Christov ID: Fundamental Ideas in Development of Ecology and Biophysics, ECOLOGICAL ENGINEERING AND ENVIRONMENT PROTECTION, 18 (4), 25-29, Sofia, 2019
2. Christov ID: Influence of Water and Nutritional Status of Soil on Quantity and Quality of Crop Production, JOURNAL OF THE BULGARIAN ACADEMY OF SCIENCES, 6, 51-56, Sofia, 2019
3. Christov ID: State of Science and Practice on Management of Agroecosystem Water Status, JOURNAL OF BALKAN ECOLOGY, 22 (3), 229-239, 2019
4. Christov ID: Management of Agroecosystem Water Status. Part 1. New Complex Scientific Base, JOURNAL OF BALKAN ECOLOGY, 11(1), 5-22, 2008
5. Christov ID: Energy Levels of Soil Moisture and Biolproductivity. – International Agricultural Physics, 6 (1-2), 89-94, 1992.

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Unit of Environmental
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George Djolov[†]

Prof. Dr.

SOUTH AFRICA

[†]Deceased

Date of election: 25 April 2015

Prof. George Djolov has been internationally recognized scholar with major contributions to the theory, observations and modelling of planetary boundary layers, air pollution and climate change. During his career, he strongly contributed to establishing and leading new scientific and educational institutions, units or programs. He has founded and acted as first director of the Institute of Ecology at the Bulgarian Academy of Sciences; has established the Bachelor of Technology Program in Applied Physics at the University of Zimbabwe; has been Dean of the School of Mathematics and Natural Sciences, Professor and Director of the Faculty of Physical and Mineral Sciences at the North-West University in South Africa.

Thanks to his broad knowledge in science and his management skills, he has served for 2 years as CEO of the National Community Water and Sanitation Training Institute in South Africa. He has been elected and during 5 years functioned as President of the World Committee on Engineering and Environment of the World Federation of Engineering Organizations (WFEO).

His world-class knowledge in atmospheric and environmental sciences was highly appreciated. So, he was member of Editorial Boards of such journals as "Climate Change" and, for 25 years, "Boundary Layer Meteorology".

Professor Djolov has published 5 books and over hundred papers in international and national scientific journals, and has made numerous presentations at international conferences.

The list of his postgraduate students, including many persons from South Africa, was so large that he did not remember some of them. The evidence of his successful leading of scientific and educational projects is total sum of his grants exceeding 20 million rand. Besides, he has led social projects important for developing education and improving living standards of underprivileged people.



Konstantinos Eleftheriadis

Dr.
GREECE

Director of Research,
NCSR Demokritos
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Date of election: 28 June 2015

Scientific Field

Atmospheric Research

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ISI Web of Science 04 May 2020

No. of articles..... 136

H index..... 33

Total citations..... 3,107

No. of Nature and
Science papers.....

Major 5 Publications

1. Eleftheriadis K, Vratolis S, Nyeki S: Aerosol black carbon in the European Arctic: Measurements at Zeppelin station, Ny-Alesund, Svalbard from 1998-2007, GEOPHYSICAL RESEARCH LETTERS, 36, DOI: 10.1029/2008GL035741, 2009
2. Karanasiou A, Siskos P, Eleftheriadis K: Assessment of source apportionment by Positive Matrix Factorization analysis on fine and coarse urban aerosol size fractions, ATMOSPHERIC ENVIRONMENT, 43, 3385-3395, DOI: 10.1016/j.atmosenv.2009.03.051, 2009
3. Eleftheriadis K, Ochsenkuhn K, Lymperopoulou Y, et al: Influence of Local and Regional Sources on the Observed Spatial and Temporal Variability of Size Resolved Atmospheric Aerosol Mass Concentrations and Water-Soluble Species in the Athens Metropolitan Area, ATMOSPHERIC ENVIRONMENT, 97, 252-261. DOI:10.1016/j.atmosenv.2014.08.013
4. Eleftheriadis K: Long-term variability of the air pollution sources reflected on the state of mixing of the urban aerosol, CURRENT OPINION IN ENVIRONMENTAL SCIENCE AND HEALTH, 8, 36-39, DOI: 10.1016/j.coesh.2019.04.001, 2019
5. Giamarelou M, Eleftheriadis K, Nyeki S, et al: Indirect Evidence of the Composition of Nucleation Mode Atmospheric Particles in the High Arctic, JOURNAL OF GEOPHYSICAL RESEARCH: ATMOSPHERES 121 (2), 965-975, DOI:10.1002/2015JD023646, 2016



Tov Elperin[†]

Prof. Dr.
ISRAEL

[†]Deceased

Date of election: 7 May 2015

Ben-Gurion University of
the Negev, Department of
Mechanical Engineering

Professor Tov Elperin (1949–2018) was born in Minsk (Soviet Union, now Belarus); graduated from Department of Physics, Minsk University; and got PhD at the Department of Physics of the Ben-Gurion University of the Negev in Israel. At the beginning of his research career, he has been working at Cornell University, USA, with Professor S.B. Pope, famous for his research in turbulence. Since 1984 he was the faculty member at the Ben-Gurion University of the Negev and, in recent decades, the head of Laboratory of Turbulent Multiscale Flows at the Department of Mechanical Engineering. He has been an internationally recognized expert in physics of turbulence, turbulent diffusion, boundary layers, aerosols, aerosol-cloud interaction, shock waves and high-speed penetration dynamics. He has published 4 books and over 300 peer-reviewed papers in international scientific journals, and presented his results at numerous international conferences. In collaboration with Professors Nathan Kleeorin and Igor Rogachevskii, he has discovered the following new physical phenomena: turbulent thermal diffusion of particles; small-scale clustering of particles in both non-stratified and stratified turbulence – phenomenon playing key role in turbulent transport, transformations of atmospheric aerosols and water droplets and, thus, in precipitation; the effect of chemical reactions on turbulent transport of particles and gases, particularly in the atmosphere where reactions could reduce turbulent diffusion of aerosol particles.

Professor Elperin was one of the key participants of cooperative work on the energetics and closure theory of stably-stratified turbulence initiated by Professor Sergej Zilitinkevich and involved Finish Meteorological Institute, University of Helsinki (Finland), Ben Gurion University of the Negev (Israel) and Nansen Environmental and Remote Sensing Centre (Norway). This work, continued for the last two decades, has yielded principal revision of the very concept and theory of the stably-stratified high-Reynolds-number turbulence inherent in atmospheric, hydrospheric and astrophysical fluid flows.

Thanks to his outstanding management skills and deep knowledge of turbulence, Professor Elperin has played the key role in foundation of the Laboratory of Turbulent Multiscale flows at the Ben-Gurion University of the Negev, and over the last decades have been leading comprehensive experimental investigations of turbulence at the Laboratory.

He has established several interdisciplinary bachelor and masters programs together with Engineering and Physics Departments of the Ben Gurion University. Thanks to his broad knowledge in both science and culture, he was an outstanding lecturer and highly appreciated supervisor of numerous Master and PhD programs.





Igor Esau

Prof. Dr.
NORWAY

Senior Researcher at the
Nansen Environmental
and Remote Sensing
Center (NERSC)

Date of election: 25 June 2012

Scientific Field

Atmospheric Sciences, Climatology, Turbulence Modelling, Computational Fluid Dynamics, Urban Sciences, Air Quality, Socio-Environmental Interactions

Researcher ID: C-6298-2008

ORCID ID: 0000-0003-4122-6340

ISI Web of Science 25 May 2020

No. of articles..... 65

H index..... 21

Total citations..... 1,776

No. of Nature and
Science papers..... 1

Major 5 Publications

1. Davy, R., Esau, I., 2016: Differences in the efficacy of climate forcings explained by variations in atmospheric boundary layer depth, NATURE COMMUNICATIONS, 7, 11690, doi:10.1038/ncomms11690
2. Wolf T, Pettersson L, Esau I: A very high-resolution assessment and modelling of urban air quality, ATMOSPHERIC CHEMISTRY AND PHYSICS, 20, 2, 625-647, DOI:10.5194/acp-20-625-2020, 2020
3. Outten, S., and Esau, I., 2017: Bjerknes Compensation in the Bergen Climate Model, CLIMATE DYNAMICS, 49(7-8), 2249-2260, doi: 10.1007/s00382-016-3447-2
4. Smedsrud L.H., I. N. Esau, R. B. Ingvaldsen, T. Eldevik, P. M. Haugan, C. Li, V. Lien, A. Olsen, A. Omar, O.H. Otterå, B. Risebrobakken, A.B. Sandø, V. Semenov and S.A. Sorokina, 2013: The role of the Barents Sea in the Arctic climate system, REVIEWS OF GEOPHYSICS, 51, doi:10.1002/rog.20017, pp1-35
5. Esau, I., R. Davy, S. Outten, S. Tyuryakov and S. Zilitinkevich, 2013: Structuring of turbulence and its impact on basic features of Ekman boundary layers, NONLINEAR PROCESSES IN GEOPHYSICS, 20, 589-604, doi:10.5194/npg-20-589-2013

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Prof. Dr.

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Date of election: 14 September 2017

Scientific Field

Environmental and Geophysical Fluid Dynamic

Researcher ID: N-5339-2014

ORCID ID: 0000-0002-9638-0698

ISI Web of Science 17 June 2020

No. of articles..... 315

H index..... 40

Total citations..... 6,011

No. of Nature and

Science papers..... 1

Major 5 Publications

1. Fernando, H.J.S., Mann, J., Laginha Mestre da Palma, et al., The Perdigão: Peering into Microscale Details of Mountain Winds, Bulletin American Meteorological Society, 100(5), 799-819, 2019. DOI: 10.1175/BAMS-D-17-0227.1
2. Zhong, Q., Hussain, F. and Fernando, H.J.S., Quantification of Turbulent Mixing in Colliding Gravity Currents, Journal of Fluid Mechanics, 851, 125-147, 2018. DOI: 10.1017/jfm.2018.488
3. Sharma, A., Conry, P., Fernando, H., Hamlet, A., Hellman, J., and Chen, F., Green and Cool Roofs to Mitigate Urban Heat Island Effects in Chicago Metropolitan Area: Evaluation with a Regional Climate Model," Environmental Research Letters, 11, 064004, 2016, DOI:10.1088/1748-9326/11/6/064004.
4. Lozovatsky, I., Wijesekera, H., Jaroz, E., Lillover, M-J., Pirro, A., Silver, Z., Centurioni, L., and Fernando, H.J.S., A Snapshot of Internal Waves and Hydrodynamic Instabilities in the Southern Bay of Bengal, Journal of Geophysical Research (Oceans), 121, 5898-5915, DOI:10.1002/2016JC011697
5. Fernando, H. J. S., E. R. Pardyjak, S. Di Sabatino, et al., Bulletin of the American Meteorological Society, 96 (11), 1945-1967, 2015. DOI:10.1175/BAMS-D-13-00131.1



Manfred M. Fischer

Fellow of the Regional Science Association International, Royal Netherlands Academy of Arts and Sciences, Austrian Academy of Sciences

AUSTRIA

Emeritus Professor in
Economic Geography,
Vienna University of
Economics and Business

Date of election: 27 May 1995

Scientific Field

Regional Science, Spatial Economics, Urban and Regional Economics,
Economic Geography, Spatial Econometrics, Spatial Data Analysis

Researcher ID: G-5960-2017

ORCID ID: 0000-0002-0033-2510

Google Scholar 2 June 2020

No. of articles.....

H index..... 51

Total citations..... 11,176

i10-index..... 139

No. of Nature and

Science papers.....

Major 5 Publications

1. LeSage JP, Fischer MM: Cross-sectional dependence model specifications in a static trade panel data setting, JOURNAL OF GEOGRAPHICAL SYSTEMS, 22, 1, 5-46, DOI: 10.1007/s10109-019-00298-y, 2020
2. Fischer MM, Huber F, Pfarrhofer M, Staufer-Steinnocher P: The dynamic impact of monetary policy on regional housing prices in the United States, REAL ESTATE ECONOMICS, DOI:10.1111/1540-6229.12274, 2019
3. Huber F, Fischer MM: A Markov switching factor-augmented VAR model for analyzing US business cycles and monetary policy, OXFORD BULLETIN OF ECONOMICS AND STATISTICS, 80, 3, 575-604, DOI: 10.1111/obes.12227, 2018
4. LeSage JP, Fischer MM: Spatial growth regressions: Model specification, estimation and interpretation, SPATIAL ECONOMIC ANALYSIS, DOI: 10.2139/ssrn.980965, 2008
5. Leung Y, Fischer MM, Wu W-Z, Mi J-S: A rough set approach for the discovery of classification rules in interval-valued information systems, INTERNATIONAL JOURNAL OF APPROXIMATE REASONING, 47, 2, 233-246, DOI: 10.1016/j.ijar.2007.05.001, 2008

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David G. Gee

Prof. Dr.
SWEDEN

University of Uppsala,
Department of Earth
Sciences

Date of election: 21 November 2017

Scientific Field
Orogen dynamics

Researcher ID:
ORCID ID:

ISI Web of Science 07 May 2020

No. of articles.....

H index.....

Total citations..... 5,486

No. of Nature and
Science papers.....

Major 5 Publications

1. Gee, D.G. & Sturt, B.A. (eds) 1985. The Caledonide Orogen–Scandinavia and Related Areas. John Wiley and Sons, Chichester, UK. 1266 pp.
2. Gee, D.G. & Pease, V. (eds) 2004. The Neoproterozoic Timanide Orogen of Eastern Baltica. Geological Society, London, Memoir 30, 255 pp.
3. Gee D.G. & Stephenson (eds) 2006, European Lithosphere Dynamics. Geological Society, London, Memoir 32, 662 pp.
4. Gee, D.G. & Ladenberger, A (Eds) 2008. Earth System Science: Foundation for Sustainable Development. Episodes, 31 (1), 200 pp.
5. Stephens M.B. & Bergman Weihed, J. (eds) 2020. Sweden: Lithotectonic Framework, Tectonic Evolution and Mineral Resources. Geological Society, London, Memoir 50, Four chapters summarizing the Swedish (and Scandinavian) Caledonides

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Petar Getsov

Corr. member of Bulgarian Academy of Sciences, Academician of Russian Academy for Cosmonautics, Member of New York Academy of Sciences, Chairman of Bulgarian Astronautical Federation, Academy Professor
BULGARIA

Corr. Member, Prof.
DSc.-Bulgarian Academy of Sciences, Director of Space Research and Technology Institute-BAS (1996 -2018),
Now: Chief of Aerospace control systems department, Chairmen of Science Council of Space Research Institute – BAS

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Date of election: 17 May 2013

Scientific Field

Aerospace Control Systems, Avionics, Research & Development , Project management

Researcher ID:

ORCID ID:

ISI Web of Science 3 June 2020

No. of articles..... 290

H index.....32

Total citations.....260

No. of Nature and

Science papers..... 15

Major 5 Publications

1. Getsov P, Yanev R, Bo W: Hybrid Propulsion Of Multi-Copter Type Uavs, Feasibility And Current State Of The Art, AEROSPACE RESEARCH IN BULGARIA, 30, 123-133, DOI: 10.3897/arb.v30.e10, 2018
2. Getsov P, Jordanov D, Bo W: Modeling of the catastrophic version of a transport airplane, AEROSPACE RESEARCH IN BULGARIA, 30, 155-162, DOI: 10.3897/arb.v30.e13, 2018
3. Getsov P, Bo W, Jordanov D: Modeling trajectories for patrolling and observation with unmanned air vehicles, COMPTES RENDUS DE L ACADEMIE BULGARE DES SCIENCES, 71, 10, 1374-1379, DOI: 10.7546/CRABS.2018.10.11, 2018
4. Bo W, Getsov P, Zabunov S, et al: Tandem helicopter and other award winning unmanned aerial vehicle inventions COMPTES RENDUS DE L ACADEMIE BULGARE DES SCIENCES, 71, 4, 529-534, DOI: 10.7546/CRABS.2018.04.12, 2018
5. Getsov P, Bo W, Zafirov, D, et al: An unmanned aerial surveillance system in urban environments, AEROSPACE RESEARCH IN BULGARIA, 29, 94-110, 2017



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Date of election: 21 September 2017

Scientific Field
Climate Sciences

Researcher ID: O-1433-2019
ORCID ID: 0000-0001-5177-7133
ISI Web of Science 8 May 2020
No. of articles..... 298
H index..... 59
Total citations..... 14,843
No. of Nature and
Science papers..... 5

Major 5 Publications

1. Ghil M and R. Vautard: Interdecadal oscillations and the warming trend in global temperature time series, *Nature*, 350, 324–327
2. Ghil, M., and P. Malanotte-Rizzoli, 1991: Data assimilation in meteorology and oceanography, *Adv. Geophys.*, 33, 141–266
3. Ghil, M.: A century of nonlinearity in the geosciences, *Earth & Space Science*, 6, 7, 1007–1042, DOI: 10.1029/2019EA000599, 2019
4. Ghil, M., et al., 2002: Advanced spectral methods for climatic time series, *Rev. Geophys.*, 40(1), pp. 3.1–3.41, DOI:10.1029/2000RG000092
5. Ghil, M., and V. Lucarini, 2020: The physics of climate variability and climate change, *Rev. Mod. Phys.*, in press, arXiv:1910.00583.





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Hans-Christen Hansson

Prof. Dr.
SWEDEN

Date of election: 4 December 2017

Scientific Field
Atmospheric Science

Researcher ID:
ORCID ID:

ISI Web of Science 8 May 2020

No. of articles..... 175

H index..... 49

Total citations..... 9,127

No. of Nature and
Science papers..... 5

Major 5 Publications

1. Sand M, Berntsen TK, Ekman AML, et al: Surface temperature response to regional black carbon emissions: do location and magnitude matter? *ATMOSPHERIC CHEMISTRY AND PHYSICS*, 20, 5, 3079-3089, DOI: 10.5194/acp-20-3079-2020, 2020
2. Lewinschal A, Ekman AML, Hansson HC, et al: Local and remote temperature response of regional SO₂ emissions, *ATMOSPHERIC CHEMISTRY AND PHYSICS*, 19, 4, 2385-2403, DOI: 10.5194/acp-19-2385-2019, 2019
3. Acosta Navarro J, Ekman AML, Pausata FRS, Lewinschal A, Varma V, Seland Ø, Gauss M, Iversen T, Kirkevåg A, Riipinen I, Hansson HC: Future Response of Temperature and Precipitation to Reduced Aerosol Emissions as Compared with Increased Greenhouse Gas Concentrations, *J. Climate*, 30 (3): 939-954, DOI:10.1175/JCLI-D-16-0466.1, 2017
4. Acosta Navarro J, Varma V, Riipinen I, Seland Ø, Kirkevåg A, Struthers H, Iversen T, Hansson HC, & Ekman AML: Amplification of Arctic warming by past air pollution reductions in Europe, *Nature Geoscience*, 9, 277-281, DOI:10.1038/ngeo2673, 2016
5. Dall'Osto M, Beddows DCS, Asmi A, et al: Novel insights on new particle formation derived from a pan-european observing system, *SCIENTIFIC REPORTS*, 8, 1482, DOI: 10.1038/s41598-017-17343-9, 2018



Martin Heimann

Prof. Dr.
GERMANY

Director Emeritus ,
Max-Planck-Institute for
Biogeochemistry

Date of election: 8 July 2015

Scientific Field

Biogeochemistry, global carbon cycle, atmospheric greenhouse gases,
carbon cycle - climate interactions, Arctic biogeochemistry

Researcher ID: H-7807-2016

ORCID ID: 0000-0001-6296-5113

ISI Web of Science 11 May 2020

No. of articles..... 269

H index..... 77

Total citations..... 21,570

No. of Nature and
Science papers..... 20

Major 5 Publications

1. Knox SH, Jackson RB, Poulter B, et. al: FLUXNET-CH₄ Synthesis Activity: Objectives, Observations, and Future Directions, BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY, 100, 12, 2607-2632, DOI: 10.1175/BAMS-D-18-0268.1, 2019
2. Reum F, Gockede M, Lavric JV, et. al: Accurate measurements of atmospheric carbon dioxide and methane mole fractions at the Siberian coastal site Ambarchik, ATMOSPHERIC MEASUREMENT TECHNIQUES, 12, 11, 5717-5740, DOI: 10.5194/amt-12-5717-2019, 2019
3. Morgan EJ, Lavric JV, Arevalo-Martinez DL, et. al: Air-sea fluxes of greenhouse gases and oxygen in the northern Benguela Current region during upwelling events, BIOGEOSCIENCES, 16, 20, 4065-4084, DOI: 10.5194/bg-16-4065-2019, 2019
4. Makela J, Knauer J, Aurela M, et. al: Parameter calibration and stomatal conductance formulation comparison for boreal forests with adaptive population importance sampler in the land surface model JSBACH, GEOSCIENTIFIC MODEL DEVELOPMENT, 12, 9, 4075-4098, DOI: 10.5194/gmd-12-4075-2019, 2019
5. Zhu P, Zhuang QL, Welp L, et. al: Recent Warming Has Resulted in Smaller Gains in Net Carbon Uptake in Northern High Latitudes, JOURNAL OF CLIMATE, 32, 18, 5849-5863, DOI: 10.1175/JCLI-D-18-0653.1, 2019

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Albert A. M. Holtslag

Fellow American Meteorological Society
NETHERLANDS

Date of election: 18 May 2015

Scientific Field

Meteorology and Climate Studies, Boundary Layer Meteorology, Land-Atmosphere Interactions, Urban Meteorology, Wind Energy

Emeritus Professor of Meteorology, Wageningen University

President of European Meteorological Society (Sept 2020-Sept 2023)

Researcher ID: B-7842-2010

ORCID ID: 0000-0003-0995-2481

ISI Web of Science/GoogleScholar 4 June 2020

No. of articles..... 169

H index..... 50 / 65

Total citations..... 10,241 / 21,235

i10-index..... 174

No. of Nature and

Science papers.....

Major 5 Publications

1. AAM Holtslag, G Svensson, P Baas, S Basu, B Beare, ACM Beljaars et al., 2013: Stable atmospheric boundary layers and diurnal cycles - Challenges for weather and climate models. *Bulletin of the American Meteorological Society* 94 (11), 1691-1706.
2. RJ Ronda, GJ Steeneveld, BG Heusinkveld, JJ Attema, AAM Holtslag, 2017: Urban finescale forecasting reveals weather conditions with unprecedented detail. *Bulletin of the American Meteorological Society* 98 (12), 2675-2688.
3. AM Droste, GJ Steeneveld, AAM Holtslag, 2018: Introducing the urban wind island effect. *Environmental research letters* 13 (9), 094007.
4. Kalverla PC, Holtslag AAM, Ronda RJ, Steeneveld GJ, 2020: Quality of wind characteristics in recent wind atlases over the North Sea, *Quarterly Journal of the Royal Meteorological Society* 146 (728), 1498-1515, DOI: 10.1002/qj.3748
5. Manola I, GJ Steeneveld, R Uijlenhoet, AAM Holtslag, 2020: Analysis of urban rainfall from hourly to seasonal scales using high-resolution radar observations in the Netherlands. *International Journal of Climatology* 40 (2), 822-840

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Frank Hoffmann

Chairman KDT "Automation Cartographic Processes" (GDR), Member of National Committee "Geography&Cartography" (GDR), Corresponding Member of ICA "Automation in Cartography" (GDR), Expert at BOWGIS "Education Center East-West" Dresden (BRD), External Expert at EU Commission CT-EX2002Bo50267-103 (EC)
GERMANY

Date of election: 18 May 1996

Scientific Field

Topographic & Thematic & Planning Cartography, Cadastre, Surveying & Mapping, Topography, Photogrammetry, Cartomatics, Geomatics, Enviro & GeoInformation Sciences

Researcher ID: n/a

ORCID ID:

No. of articles..... 171

No. of RDT papers.... 42

As Examples: Supervising and managing R&D Projects at TU Dresden in cooperation with VVB "Erdöl/Erdgas" Gommern, FLS "Territorialplanning" Berlin, TREUHAND (RealEstate) Berlin,, MKD (MilCartoService) Halle, MTD (MilTopoService) Prenzlau, CVUT

Major 5 Publications

1. Hoffmann F.: Automatisierung Kartographischer Prozesse. In: Ogrissek [Ed.] "Brockhaus abc Kartenkunde", Leipzig: 1983, 632pp.
2. Hoffmann F.: Automated Construction of cartographic design by digital setter DIGISET-400. In: "Modern techniques of maps compilation", Kirschbaum Verlag, Bonn: 1991, pp. 199-214
3. Hoffmann F.: Computer assisted communication & computer connectivity as the new challenge of the 90ies for Central and East European Cartography. In: "From Space to Territory - Spatial Information Systems Conference", Presented Pisa: 1992 (Italy)
4. Hoffmann F.: ACCESS to MetaInformation for Spatial PLANNING In: "Urban Planning & GIS", Workshop in BITOV (CZ) 2007, 87 pp.
5. Hoffmann F.: INSPIRE - Interoperability of Geospatial Data, Services and Applications: The Status quo of INSPIRE Standardization solutions in EU, DE, SN and DD. In: MIIGAiK240, «Пространственные данные - основа стратегического планирования, управления и развития», Moscow: 2019, 62 pp.

HS-Dozent (Associate. prof.) Dr. Ing.

TU Dresden, Section Geodesy & Cartography;

Moscow State University of Geodesy and Cartography;

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EUROPEAN
CENTRE



Juha A. Janhunen

Prof. Dr.
FINLAND

University of Helsinki

Date of election: 28 September 2017

Scientific Field

Ethnohistory and Comparative Linguistics, Human and Social Sciences

Researcher ID: J-5405-2017

ORCID ID: 0000-0003-1242-8808

ISI Web of Science 11 May 2020

No. of articles..... 21

H index..... 4

Total citations..... 51

No. of Nature and
Science papers.....

Major 5 Publications

1. Gruzdeva E, Janhunen J: The Revitalization of Nivkh on Sakhalin, ROUTLEDGE HANDBOOK OF LANGUAGE REVITALIZATION, Routledge Handbooks, 464-472, 2018
2. Lappalainen HK, Kerminen VM, Petaja T, et. al: Pan-Eurasian Experiment (PEEX): towards a holistic understanding of the feedbacks and interactions in the land-atmosphere-ocean-society continuum in the northern Eurasian region, ATMOSPHERIC CHEMISTRY AND PHYSICS, 16, 22, 14421-14461, DOI: 10.5194/acp-16-14421-2016, 2016
3. Janhunen J: Non-borrowed non-cognate parallels in bound morphology: aspects of the phenomenon of shared drift with Eurasian examples, COPIES VERSUS COGNATES IN BOUND MORPHOLOGY, Brill's Studies in Language Cognition and Culture, 2, 23-46, 2012
4. Janhunen J: Mongolian. London Oriental and African Languages Library 19. Amsterdam: John Benjamins, 2012
5. Janhunen J, Wu Y: New materials on the Khitan Small Script. Languages of Asia 9. Folkstone: Global Oriental / Brill, 2010

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Sylvain Michel Joffre

Prof. Dr.

FINLAND/FRANCE

Chairman of Programme
& Science Committee
and Committee on
Meetings of the
European Meteorological
Society

Date of election:

21 May 2021

Scientific Field

Boundary layer dynamics; Air Pollution and Long-range transport; Air-sea interactions; Atmospheric physico-chemistry; Numerical Weather Prediction

Researcher ID:

ORCID ID: 0000-0002-6795-1754

SCOPUS ID: 6603741689

ISI Web of Science 8 July 2021

No. of articles..... 31

H index.....18

Total citations.....1,532

No. of Nature and

Science papers.....

Major 5 Publications

1. Zilitinkevich S.S., I. Mammarella, A. A. Baklanov, & S. M. Joffre, 2008: The effect of stratification on the aerodynamic roughness length and displacement height. *Boundary layer Meteorol.* 129, pp. 179-190. DOI 10.1007/s10546-008-9307-9.
2. Joffre S.M., Kangas M, Heikinheimo M. & Kitaigorodskii S.A, 2001. Variability of the stable and unstable atmospheric boundary layer height and its scales over a boreal forest. *Boundary-Layer Meteorol.* 99(3), 429-450.
3. Hakola H., Joffre S.M., Lättilä H. & P. Taalas, 1991. Transport, formation, and sink processes behind surface ozone variability in North European conditions. *Atmos. Environ.* 25A8, 1437-1447.
4. Joffre S.M., 1988. Modelling the Dry Deposition Velocity of Highly Soluble Gases to the Sea Surface. *Atmos. Environ.*, 22(6), p. 1137-1146.
5. Joffre S.M., 1982. Momentum and Heat Transfers in the Surface Layer over a Frozen Sea. *Boundary-Layer Meteorol.* 24(2), p. 211-229.

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Vladimir L. Katanaev

Prof., Dr. habil., Dr. rer. nat.
SWITZERLAND/RUSSIA

Date of election: 21 May 2021

Scientific Field

Intracellular signal transduction, cancer, neurodegenerative diseases, drug discovery and development, biological and bio-inspired nanostructures and nanocoatings, WNT signaling, medicinal chemistry, natural products, breast cancer

Researcher ID: F-9480-2014

ORCID ID: 0000-0002-7909-5617

ISI Web of Science 8 July 2021

No. of articles..... 102

H index..... 25

Total citations..... 2,833

No. of Nature, Science
and Cell papers..... 4

Major 5 Publications

1. Kryuchkov M, Bilousov O, Lehmann J, Fiebig M, Katanaev VL: Reverse and forward engineering of Drosophila corneal nanocoatings, Nature, 585:7825, 383-389, 2020
2. Solis GP, Bilousov O, Luchtenborg AM, Koval A, Lin C, Katanaev VL: Golgi-resident Gao promotes protrusive membrane dynamics, Cell, 170:5, 939-955, 2017
3. Zielinska KA, Katanaev VL: Information theory: New Look at oncogenic signaling pathways, Trends in Cell Biology, 29:11, 862-875, 2019
4. Lin C, Koval A, Tishchenko S, Gabdulkhakov A, Tin U, Solis G, Katanaev VL: Double suppression of the Galpha protein activity by RGS proteins, Molecular Cell, 53:4, 663-671, 2014
5. Keshelava A, Solis GP, Hersch M, Koval A, Kryuchkov M, Bergmann S, Katanaev VL: High capacity in G protein-coupled receptor signaling, Nature Communications, 9: 876, 2018

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Oncology, Department
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Date of election: 28 September 2017

Scientific Field

Atmospheric Research

Researcher ID: M-9026-2014

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ISI Web of Science 18 June 2020

No. of articles..... 293

H index..... 67

Total citations..... 16,739

No. of Nature and

Science papers..... 7

Major 5 Publications

1. Kerminen V-M, Chen X, Vakkari V, et al (2018): Atmospheric new particle formation and growth: review of field observations, *Environ. Res. Lett.* 13, 103003, DOI:10.1088/1748-9326/aadf3c
2. Yao L, Garmash O, Bianchi F, et al (2018): Atmospheric new particle formation from sulfuric acid and amines in a Chinese megacity, *Science* 361, 278-281
3. Lehtipalo K, Yan C, Dada L, et al (2018): Multicomponent new particle formation from sulfuric acid, ammonia, and biogenic vapors. *Sci. Adv.* 4, eaau5363, 2018
4. Wang J, Zhao B, Wang S, et al (2017): Particulate matter pollution over China and the effects of control policies. *Sci. Total Environ.* 584-585, 426-447
5. Chu B, Kerminen V-M, Bianchi F, et al (2019): Atmospheric new particle formation in China. *Atmos. Chem. Phys.* 19, 115-138



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Scientific Field

Sociology, Russian studies, Social policy, International relations, Cultural studies, Energy policy

Researcher ID: H-7915-2016

ORCID ID:

ISI Web of Science 12 May 2020

No. of articles..... 13

H index..... 4

Total citations..... 49

No. of Nature and
Science papers.....

Major 5 Publications

1. Markku Kivinen and Mikhail Maslovskiy: Russian Modernization a New Paradigm. In Markku Kivinen and Brendan Humphreys (ed.) Russian Modernization: A New Paradigm. Routledge. Studies on Contemporary Russia Series 2020, pp. 6-28.
2. Kivinen, M., Kainu, M., Kuhnle, S. & Li, C: Reform and Stability – The Russian and the Chinese Welfare Systems Compared In: Russian Politics. 4, 3, p. 423-446.
3. Kivinen M, Cox T: Russian Modernisation-A New Paradigm, EUROPE-ASIA STUDIES, 68, 1, SI, 1-19, DOI: 10.1080/09668136.2015.1125573, 2016
4. Kainu M, Kulmala M, Nikula J, Kivinen M: The Russian welfare state system With special reference to regional inequality, ROUTLEDGE INTERNATIONAL HANDBOOK TO WELFARE STATE SYSTEMS, Routledge International Handbooks, 291-316, 2017
5. Aalto P, Dusseault D, Kennedy MD, Kivinen M: Russia's energy relations in Europe and the Far East: towards a social structurationist approach to energy policy formation, JOURNAL OF INTERNATIONAL RELATIONS AND DEVELOPMENT, 17, 1, 1-29, DOI: 10.1057/jird.2012.29, 2014



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Scientific Field
Atmospheric Research

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ORCID ID:

ISI Web of Science 12 May 2020
No. of articles..... 183
H index..... 34
Total citations..... 3,748
No. of Nature and
Science papers.....

Major 5 Publications

1. Rogachevskii I, Kleeorin N: Generation of a large-scale vorticity in a fast-rotating density-stratified turbulence or turbulent convection, PHYSICAL REVIEW E, 100, 6, 063101, DOI: 10.1103/PhysRevE.100.063101, 2019
2. Kleeorin N, Rogachevskii I, Soustova IA, et al: Internal gravity waves in the energy and flux budget turbulence-closure theory for shear-free stably stratified flows, PHYSICAL REVIEW E, 99, 6, 063106, DOI: 10.1103/PhysRevE.99.063106, 2019
3. Kuzanyan KM, Safiullin N, Kleeorin N, et al: Large-Scale Properties of the Tilt of Sunspot Groups and Joy's Law Near the Solar Equator, ASTROPHYSICS, 62, 2, 261-275, DOI:10.1007/s10511-019-09579-2, 2019
4. Schober, J (Schober, J.); Brandenburg, A (Brandenburg, A.); Rogachevskii, I (Rogachevskii, I.); Kleeorin N: Energetics of turbulence generated by chiral MHD dynamos, GEOPHYSICAL AND ASTROPHYSICAL FLUID DYNAMICS, 113, 1-2, SI, 107-130, DOI: 10.1080/03091929.2018.1515313, 2019
5. Losada IR, Warnecke J, Brandenburg A, et al: Magnetic bipoles in rotating turbulence with coronal envelope, ASTRONOMY & ASTROPHYSICS, 621, A61, DOI: 10.1051/0004-6361/201833018, 2019

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Professor, Head
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Cartography, Faculty
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Date of election: 18 May 1996

Scientific Field

Cartography, GIS, Spatial Data Infrastructures, Spatial Big Data, Early Warning, Disaster Risk Management and Disaster Risk Reduction, Mapping for children and seniors

Researcher ID: AAL-5794-2020

ORCID ID:

ISI Web of Science 9 July 2020

No. of articles..... 29

H index..... 7

Total citations..... 167

No. of Nature and

Science papers.....

Major 5 Publications

1. Konečný M, Bandrova TL, Kubiček P, et al: Digital Earth for Disaster Mitigation, MANUAL OF DIGITAL EARTH, 495-526, DOI:10.1007/978-981-32-9915-3_15, 2019
2. Kubiček P, Konečný M, Stachoň Z, et al: Population Distribution Modeling at Fine Spatio-temporal Scale Based on Mobile Phone Data, INTERNATIONAL JOURNAL OF DIGITAL EARTH, 12, 11, 1319-1340, DOI: 10.1080 / 17538947.2018.1548654, 2019
3. Lin, Hui; Batty, Michael, ...Konecny, Milan et al.: Virtual Environments Begin to Embrace Process-based Geographic Analysis. TRANSACTIONS IN GIS, 19 4, 493-498, 2015; DOI:10.1111/tgis.12167
4. Annoni, A.; Craglia, M.; ...Konecny M., et al: A European perspective on Digital Earth, INTERNATIONAL JOURNAL OF DIGITAL EARTH, 4, 4, 271-284, 2011; DOI:10.1080/17538947.2011.582888
5. Konečný, Milan – Rais, Karel. Geografické informační systémy. Folia Geographica, roč. XXVI, Geographia 21, č. 13. Brno, 1985. 196 s. (first GIS textbook in the World).

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Scientific Field

Sea-level Change, Quaternary Geology,
Precambrian Geology

Researcher ID:

ORCID ID: 0000-0001-7240-8425

ISI Web of Science 12 May 2020

No. of articles..... 63

H index..... 24

Total citations..... 1,551

No. of Nature and

Science papers.....

Major 5 Publications

1. Kroonenberg SB, Rusakov GV, Svitoch AA: The wandering of the Volga delta: a response to rapid Caspian Sea-level changes, *Sedimentary Geology* 107:189-209, DOI: 10.1016/S0037-0738(96)00028-0, 1997
2. Kroonenberg SB, Badyukova EN, Storms JEA, Ignatov EI, Kasimov NS: A full sea-level cycle in sixty-five years: barrier dynamics along Caspian shores. *Sedimentary Geology* 134:257-274, 2000
3. Kroonenberg SB, Kasimov NS, Lychagin MYu: The Caspian Sea, a natural laboratory for sea-level change. *Geography, Environment, Sustainability*, 1,1,22-37, 2008
4. Kroonenberg SB, De Roever EWF, Fraga LM, Reis NJ, Faraco MT, Cordani UG, Lafon J-M & Wong Th E: Paleoproterozoic evolution of the Guiana Shield in Suriname – a revised model. *Netherlands Journal of Geosciences- Geologie en Mijnbouw* 95:491-522, 2016
5. Kroonenberg SB: The Proterozoic Basement of the Western Guiana Shield and the Northern Andes. In: F. Cedié, R. P. Shaw (eds.), *Geology and Tectonics of Northwestern South America*, *Frontiers in Earth Sciences*, Springer, 115-192, 2019

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Date of election: 24 June 2013

Scientific Field

Air Quality, Atmosphere, Aerosols, Trace Gases, Biosphere, Atmospheric Chemistry, Climate, Continuous Comprehensive Observations, Feedback's and Interactions, Meteorology and Atmospheric Sciences

Researcher ID: I-7671-2016

ORCID ID: 0000-0003-3464-7825

ISI Web of Science 20 October 2020

No. of articles..... 1100

H index..... 117

Total citations..... 57,600

No. of Nature and

Science papers..... 34

Major 5 Publications

1. Kulmala M: Build a global Earth observatory, *Nature*, 553:7686, 21-23, 2018
2. Kulmala M, Kerminen VM, Petäjä T, et al: Atmospheric gas-to-particle conversion: why NPF events are observed in megacities? *Faraday Discussions*, 200, 271-288, DOI: 10.1039/c6fd00257a, 2017
3. Kulmala M: China's choking cocktail, *Nature*, 526, 497-499, 2015
4. Kulmala M, Petäjä T, Kerminen VM, et al: On secondary new particle formation in China, *Frontiers Of Environmental Science & Engineering*, 10:5(08), DOI: 10.1007/s11783-016-0850-1 and 10, DOI: 10.1007/s11783-016-0857-7, 2016
5. Kulmala M, Petaja T, Ehn M, et al: Chemistry of Atmospheric Nucleation: On the Recent Advances on Precursor Characterization and Atmospheric Cluster Composition in Connection with Atmospheric New Particle Formation, *Book Series: Annual Review of Physical Chemistry*, 65, 21-37, DOI: 10.1146/annurev-physchem-040412-110014, 2014

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Date of election: 19 September 2019

Scientific Field

High Pressure Physics, Chemistry, Geochemistry, Energy, Petroleum
Science

Researcher ID: R-9275-2016

ORCID ID:

ISI Web of Science 1 June 2020

No. of articles..... 33

H index..... 9

Total citations..... 290

No. of Nature and

Science papers..... 5

Major 5 Publications

1. Serovaiskii A, Kutcherov V: Formation of complex hydrocarbon systems from methane at the upper mantle thermobaric conditions, SCIENTIFIC REPORTS, 10, 1, 4559, DOI: 10.1038/s41598-020-61644-5, 2020
2. Mukhina E, Kolesnikov A, Kutcherov V: The lower pT limit of deep hydrocarbon synthesis by CaCO₃ aqueous reduction. SCIENTIFIC REPORTS, 7, 1, 5749, DOI: 10.1038/s41598-017-06155-6, 2017
3. Kolesnikov AY, Saul JM, Kutcherov VG: Chemistry of hydrocarbons under extreme thermobaric conditions, ChemistrySelect, 2, 4, 1336-1352, DOI: 10.1002/slct.201601123, 2017
4. Kolesnikov AY, Kutcherov VG, Goncharov AF: Methane-derived hydrocarbons produced under upper-mantle conditions, NATURE GEOSCIENCE, 2, 566 – 570, DOI: 10.1038/ngeo591, 2009
5. Kenney JF, Kutcherov VG, Bendeliani NA, Alekseev VA. The evolution of multicomponent systems at high pressures: VI. The thermodynamic stability of the hydrogen–carbon system: The genesis of hydrocarbons and the origin of petroleum. PNAS, 299, 17, 10976-10981, DOI:10.1073/pnas.172376899, 2002.

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Date of election: 08 July 2015

Scientific Field

Atmospheric and Climate Research

Researcher ID: B-5094-2011

ORCID ID: 0000-0002-1657-2383

ISI Web of Science 13 May 2020

No. of articles..... 254

H index..... 63

Total citations..... 16,322

No. of Nature and

Science papers..... 11

Major 5 Publications

1. Laaksonen A: A unifying model for adsorption and nucleation of vapors on solid surfaces. JOURNAL OF PHYSICAL CHEMISTRY A 119, 16, 3736-3745, DOI: 10.1021/acs.jpca.5b00325, 2015
2. Mikkonen S, Laine M, Mäkelä HM et al: Trends in the average temperature in Finland, 1847-2013. STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT 29, 6, 1521-1529, DOI: 10.1007/s00477-014-0992-2, 2015
3. Laaksonen A, Kulmala M, O'Dowd CD et al: The role of VOC oxidation products in continental new particle formation. ATMOSPHERIC CHEMISTRY AND PHYSICS 8, 10, 2657-2665, DOI: 10.5194/acp-8-2657-2008, 2008
4. Sorjamaa R, Svenningsson B, Raatikainen T et al: The role of surfactants in Köhler theory reconsidered. ATMOSPHERIC CHEMISTRY AND PHYSICS 4, 2107-2117, DOI: 10.5194/acp-4-2107-2004, 2004
5. Laaksonen A, Korhonen P, Kulmala M et al: Modification of the Köhler equation to include soluble trace gases and slightly soluble substances. JOURNAL OF THE ATMOSPHERIC SCIENCES 55, 5, 853-862 DOI: 10.1175/1520-0469(1998)055<0853:MOTKHE>2.0.CO;2, 1998



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Date of election: 7 July 2015

Scientific Field

Atmospheric Research, Atmospheric Aerosol

Researcher ID:

ORCID ID:

ISI Web of Science 12 May 2020

No. of articles..... 133

H index..... 46

Total citations..... 7,661

No. of Nature and

Science papers..... 2

Major 5 Publications

1. Laj, P., et al. A global analysis of climate-relevant aerosol properties retrieved from the network of GAW near-surface observatories, Atmos. Meas. Tech. 2020.
2. Zanatta M, Laj P, Gysel M, et al: Effects of mixing state on optical and radiative properties of black carbon in the European Arctic, Atmos. Chem. Phys, 2018
3. Petzold, et al., Recommendations for reporting "black carbon" measurements Atmos. Chem. Phys. 2013
4. Venzac, H., et al., High Frequency New Particle Formation in the Himalayas; PNAS, 2007
5. Putaud, J.-P. et al., A European aerosol phenomenology--2: chemical characteristics of particulate matter at kerbside, urban, rural and background sites in Europe, Atmos. Environ. 2004

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Date of election: 15 November 2016

Scientific Field
Forest Ecology

Researcher ID:
ORCID ID: 0000-0003-3221-2318
ISI Web of Science 13 May 2020
No. of articles..... 24
H index..... 11
Total citations..... 692
No. of Nature and
Science papers.....

Major 5 Publications

1. Lappalainen H, Altimir N, Kerminen VM, et al: Pan-Eurasian Experiment (PEEX) Program: An overview of the first 5 years in operation and future prospects, GEOGRAPHY, ENVIRONMENT, SUSTAINABILITY, 11, 1, DOI: 10.24057/2071-9388-2018-11-1-6-19, 2018
2. Lappalainen H, Kulmala M, Kujansuu J, et al: The Silk Road agenda of the Pan-Eurasian Experiment (PEEX) program, BIG EARTH DATA, 2, 1, 8-35, DOI: 10.1080/20964471.2018.1437704, 2018
3. Lappalainen H, Kerminen VM, Petäjä T, et al: Pan-Eurasian Experiment (PEEX): towards a holistic understanding of the feedbacks and interactions in the land-atmosphere-ocean-society continuum in the northern Eurasian region, ATMOSPHERIC CHEMISTRY AND PHYSICS, 16, 14421-14461, DOI: 10.5194/acp-16-14421-2016, 2016
4. Kulmala M, Lappalainen H, Petäjä T, et al: Introduction: The Pan-Eurasian Experiment (PEEX) – multidisciplinary, multiscale and multi-component research and capacity-building initiative, ATMOSPHERIC CHEMISTRY AND PHYSICS, 15, 13085-13096, DOI: 10.5194/acp-15-13085-2015, 2015
5. Kulmala M, Asmi A, Lappalainen H, et al: General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) – integrating aerosol research from nano to global scales, ATMOSPHERIC CHEMISTRY AND PHYSICS, 11, 13061-13143, DOI: 10.5194/acp-11-13061-2011, 2011

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Søren Ejling Larsen

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Emeritus

Date of election: 29 December 2012

Scientific Field

Wind Energy, Meteorology

Researcher ID: L-2389-2017

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ISI Web of Science 15 May 2020

No. of articles..... 110

H index..... 22

Total citations..... 1,694

No. of Nature and

Science papers..... 1

Major 5 Publications

1. Petrosyan, A., B. Galperin, S.E. Larsen, S.R. Lewis, A. Määttänen, P. L. Read, N. Renno, L.P.H.T. Rogberg, H. Sävjärvi, T. Siili, A. Spiga, A. Toigo, L. Vázquez, (2011). The Martian Atmospheric Planetary Boundary Layer. *Reviews of Geophysics*, 49, RG3005, DOI: 10.1029/2010RG000351, 1-46.
2. Baklanov, A. A. B. Grisogono, R. Bornstein, L. Mahrt, S.S. Zilitinkevich, P. Taylor, S. E. Larsen, M. W. Rotach and H.J.S. Fernando, (2010), On the Nature, Theory and Modelling of Atmospheric Planetary Boundary Layer. *Bull AMS*, Februar 2011. Doi: 10.1175/2010BAMS2797.1, 123-128.
3. Frandsen, S.T., H. E. Jørgensen, R. Barthelmie, O. Rathmann, J. Badger, K. Hansen, S. Ott, P.-E. Rethore, S. E. Larsen, L. E. Jensen, (2009), The making of a second-generation wind farm efficiency model-complex. *Wind Energy*, Vol 12 (5) 445-458. Doi 10.1002/we.351
4. Fairall, C.W. and Larsen, S.E. (1986). Inertial dissipation methods and turbulent fluxes at the air-ocean interface. *Boundary-Layer Meteorol.*, 34, 287-301.
5. Mikkelsen, T., Larsen, S.E. and Pecseli, H.L. (1987). Diffusion of Gaussian Puffs. *Quart. J.R. Met. Soc.*, 113 No. 475, 81-105.

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Geo Sciences,
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Date of election: 14 September 2017

Scientific Field

Numerical weather and climate modeling, in particular numerical schemes, and turbulence transports, Forecast verification

Researcher ID: L-2389-2017

ORCID ID:

ISI Web of Science/GoogleScholar 15 May 2020/5 June 2020

No. of articles..... 35 / 87

H index..... 17 / 27

Total citations..... 1,370 / 7, 450

i10-index.....

No. of Nature and

Science papers.....

Major 5 Publications

1. Mesinger F, Chou SC, Gomes J, et al: An upgraded version of the Eta model. Meteor. Atmosph. Phys., 116, 63-79, DOI: 10.1007/s00703-012-0182-z, 2012
2. Mesinger F, Veljovic K: Eta vs. sigma: Review of past results, Gallus-Klemp test, and large-scale wind skill in ensemble experiments. Meteor. Atmosph. Phys., 129, 573-593, DOI: 10.1007/s00703-016-0496-3, 2017
3. Mesinger F, DiMego G, Kalnay E, et al: North American Regional Reanalysis. Bull. Amer. Meteor. Soc., 87, 343-360, DOI: 10.1175/BAMS-87-3-343, 2006
4. Mesinger F: Several PBL parameterization lessons arrived at running an NWP model. IOP Publishing, IOP Conf. Series: Earth and Environmental Science, 13, 012005 DOI: 10.1088/1755-1315/13/1/012005, 2010
5. Mesinger F: Bias adjusted precipitation threat scores. Adv. Geosci., 16, 137-143, DOI: 10.5194/adgeo-16-137-2008, 2008

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Date of election: 6 December 2016

Scientific Field

Russian language and culture, (Mis)communication

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Google Scholar 8 July 2020

No. of articles..... 229

H index..... 22

Total citations..... 2,320

i10-index..... 47

No. of Nature and

Science papers.....

Major 5 Publications

1. Viimaranta J, Mustajoki A: What can science, religion, politics, culture and the economy do? A corpus study of metonymical conceptualization combined with personification, *Scando-Slavica*, 2020, DOI: 10.1080/00806765.2020.1741025, 2020
2. Mustajoki, A. The democratization of Russian. In: *The soft power of the Russian language: Pluricentricity, politics and policies*, ed. by A. Mustajoki, E. Protassova & M. Yelenevskaya. London, New York: Routledge, 2020, 21–34.
3. Mustajoki, A. Why is miscommunication more common in everyday life than in lingua franca conversation? In: *Current Issues in Intercultural Pragmatics (Pragmatics and Beyond New Series)*, ed. by I. Kecskes and S. Assimakopoulos. Amsterdam/Philadelphia: John Benjamins, 2017, 55–74.
4. Laine, V., Mustajoki, A. Preconditions for Russian modernisation: a media analysis. In: *Philosophical and Cultural Interpretations of Russian Modernisation*, ed. by K. Lehtisaari and A. Mustajoki. Abingdon: Routledge 2017, 175–190.
5. Мустайоки, А., Сабитова, Т., Парменова Т., Бирюлин, Л. Функциональный синтаксис русского языка. Москва: Юрайт, 2019, 728 стр.

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Science

Date of election: 19 September 2019

Scientific Field

Ecological and Atmospheric Research, Air Quality, Greenhouse Gases,
Trace Gases, Biogeochemical Cycles, Mathematical Modelling, Complex
Systems, Forest Ecosystem Dynamics

Researcher ID: G-7549-2016

ORCID ID:

ISI Web of Science 01 June 2020

No. of articles..... 49

H index.....16

Total citations.....758

No. of Nature and
Science papers.....

Major 5 Publications

1. Kitz F et al: Soil COS Exchange: A Comparison of Three European Ecosystems, Global Biogeochemical cycles, 34, 4, DOI: 10.1029/2019GB006202, 2020
2. Noe SM, Niinemets Ü: Impact of Gall-Forming Insects on Global BVOC Emissions and Climate: A Perspective, Frontiers in Forests and Global Change, 3, p9, DOI: 10.3389/ffgc.2020.00009, 2020
3. Xiao JF, Li X, He BB, et al: Solar-induced chlorophyll fluorescence exhibits a universal relationship with gross primary productivity across a wide variety of biomes, Global Change Biology, 25, 4, E4-E6, DOI: 10.1111/gcb.14565, 2019
4. Ezhova E et al: Direct effect of aerosols on solar radiation and gross primary production in boreal and hemiboreal forests, Atmospheric Chemistry and Physics, 18, 24, 17863-17881, DOI: 10.5194/acp-18-17863-2018, 2018
5. Noe S.M., et al.: Seasonal variation and characterisation of reactive trace gas mixing ratios over a hemi-boreal mixed forest site in Estonia, Boreal Env. Res. 21: 332-344, 2016

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Ferjan Ormel

Honorary Fellow of the Netherlands Cartographic Society (2001), the Hellenic Cartographic Society (2008). Honorary doctorate Eotvos Lorand Technical University, Budapest (2013), Honorary doctorate Aristoteles University, Thessaloniki (2015)
NETHERLANDS

Date of election: 1995

Scientific Field
Cartography

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Major 5 Publications

1. Kraak M, Ormel, F: Cartography, visualization of geospatial data. CRCPress, Boca Raton 2020
2. Van Diessen JR, Ormel, F: Comprehensive atlas of the Netherlands East Indies: Asia Maior 2003
3. Ormel, F: The exploration and survey of the outlying islands of Indonesia, 37-61 in A.J.Kent e.a. (eds.) Mapping empires: colonial cartographies of land and sea. Springer Nature, 2019
4. Ormel, F: The origin of sea names, 2053-2068 in: S.D. Brunn and R.Kehrein (eds.) Handbook of the changing world language map. Springer Nature, 2019
5. Kerfoot H, Ormel, F, Zaccheddu PG: Toponymy training Manual. UNGEGN. New York: United Nations 2017



Tuukka Petäjä

Prof. Dr.
FINLAND

Professor, Institute of
Atmospheric and Earth
System Research (INAR)
at the
University of Helsinki

Date of election: 22 May 2013

Scientific Field

Atmospheric Research, Atmospheric Aerosol

Researcher ID: A-8009-2008

ORCID ID: 0000-0002-1881-9044

ISI Web of Science 13 May 2020

No. of articles..... 390

H index..... 66

Total citations..... 18,305

No. of Nature and

Science papers..... 18

Major 5 Publications

1. Petäjä T, O'Connor EJ, Moiseev D, et al: BAECC, A field campaign to elucidate the impact of Biogenic Aerosols on Clouds and Climate, Bull. Am. Met. Soc. 97, 1909-1928, DOI:10.1175/BAMS-D-14-00199.1, 2016
2. Petäjä T, Järvi L, Kerminen V-M, et al: Enhanced air pollution via aerosol-boundary layer feedback in China, Sci. Rep. 6, 18998, DOI: 10.1038/srep18998., 2016
3. Petäjä T, Sipilä M, Paasonen P, et al: Experimental observation of strongly bound dimers of sulphuric acid: application to nucleation in the atmosphere. Phys. Rev. Lett. 106, 228302, 2011
4. Petäjä T, Mauldin III RL, Kosciuch E, et al: Sulfuric acid and OH concentrations in a boreal forest site, Atmos. Chem. Phys. 9, pp. 7435-7448, 2009
5. Petäjä T, Duplissy E-M, Tabakova K, et al: Integrative and Comprehensive Understanding on Polar Environments (iCUPE): the concept and initial results, Atmos. Chem. Phys. Discuss., DOI:10.5194/acp-2019-1217, 2020

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Igor Rogachevskii

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ISRAEL

Professor,
Department of
Mechanical Engineering,
Ben-Gurion University
of the Negev

Date of election: 22 March 2015

Scientific Field

Atmospheric Research,
Fluid Mechanics, Plasma Physics,
Geophysics, Astrophysics

Researcher ID: R-8247-2019

ORCID ID:

ISI Web of Science/GoogleScholar 12 May 2020 / 25 May 2020

No. of articles..... 176 /

H index..... 33 / 40

Total citations..... 3,550 / 5,402

i10-index.....

No. of Nature and

Science papers.....

Major 5 Publications

1. Rogachevskii I, Kleeorin N, 2007: Magnetic Fluctuations and Formation of Large-Scale Inhomogeneous Magnetic Structures in a Turbulent Convection. PHYSICAL REVIEW E, 76, 5, 056307, DOI: 10.1103/PhysRevE.76.056307
2. Elperin T, Kleeorin N, Rogachevskii I, 1998: Effect of Chemical Reactions and Phase Transitions on Turbulent Transport of Particles and Gases. PHYSICAL REVIEW LETTERS, 80, 1, 69-72, DOI: 10.1103/PhysRevLett.80.69
3. Rogachevskii I, Kleeorin N, 1997: Intermittency and Anomalous Scaling for Magnetic Fluctuations. PHYSICAL REVIEW E, 56, 1, 417-426, DOI: 10.1103/PhysRevE.56.417
4. Elperin T, Kleeorin N, Rogachevskii I, 1996: Self-Excitation of Fluctuations of Inertial Particles Concentration in Turbulent Fluid Flow. PHYSICAL REVIEW LETTERS, 77, 27, 5373-5376, DOI: 10.1103/PhysRevLett.77.5373
5. Elperin T, Kleeorin N, Rogachevskii I, 1996: Turbulent Thermal Diffusion of Small Inertial Particles". PHYSICAL REVIEW LETTERS, 76, 2, 224-228, DOI: 10.1103/PhysRevLett.76.224

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Alexander Sadovski

Active Member of New York Academy of Sciences
University Professor
BULGARIA

Professor Emeritus,
Sofia University "St.
Kliment Ohridski"

Date of election: 23 September 1994

Scientific Field

Applied Mathematics and Statistics, Data Analysis, Agriculture, Soil Science, Environmental Protection, GIS, Risk Management

ORCID ID: 0000-0001-7576-4214

Web of Science/Scopus/GoogleScholar 08 June 2020

No. of articles..... 225

H index..... - / 30 / 16

Total citations..... 202 / - / 949

i10-index.....

No. of Nature and

Science papers..... 61

Major 5 Publications

1. Sadovski A: An Introduction to Mathematical Agronomy: Theoretical and Experimental bases. LAP Lambert Academic Publishing, 2020. ISBN 978-620-2-51889-5, 284 pp.
2. Sadovski A: Detection of similar Homoclimates by Numerical Analysis. Bulgarian Journal of Soil Science, Vol. 4, Issue 1, 69-75. Sofia 2019. DOI: 10.5281/zenodo.3250857
3. Sadovski A: Solving Fuzzy Linear Regression with ST Decomposition. J. of Multidisciplinary Eng. Sci. and Technology, Vol. 6, Issue 3, March - 2019, 9615-9618. JMESTN 42352851
4. Sadovski A: Study on pH in Water and Potassium chloride for Bulgarian soils. Eurasian J Soil Sci. 2019, 8 (1) 11 – 16
5. Sadovski A: Multivariate methods of self-organizing models. J. Syst. Anal. Model. Simul., vol. 4, No. 1, 61-63. Berlin 1987
6. Sadovski A: L1-norm Fit of a Straight Line: Algorithm AS 74. J. Roy. Stat. Soc., Ser. C, 244-248. London 1974.

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Prof. Dr.

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Date of election: 14 August 2015

Scientific Field

Forestry Science, Ecosystems, Climate Change

Researcher ID: I-1505-2016

ORCID ID:

ISI Web of Science 26 May 2020

No. of articles..... 80

H index..... 32

Total citations..... 6,160

No. of Nature and

Science papers..... 3

Major 5 Publications

1. Shvidenko A, Schepaschenko D, Boului Yu. Tables and models of growth and productivity of forests of major forest forming species of Northern Eurasia. IIASA and Russian Federal Forest Service, 2nd edition, 2008
2. Shvidenko A, Schepaschenko D., McCallum M et al. Can the uncertainty of full carbon accounting be made acceptable for policy makers? CLIMATE CHANGE, 103(1-2), 137-157, DOI: 10.1007/s10584-010-9918-2, 2010
3. Pan Y, Birdsey RA, Fang J et al. A large and persistent sink in the world forests. SCIENCE, 333(6046), 998-993, DOI: 10.1126/Science.1201609, 2011
4. Steidinger BS, Crowther TW, Liang J, et al: Climatic controls of decomposition drive the global biogeography of forest-tree symbioses, NATURE, 569, 7756, 404-+, DOI: 10.1038/s41586-019-1128-0, 2019
5. Gauthier S, Bernier P, Kuuluvainen T, Shvidenko AZ et al. Boreal forests health and global change. SCIENCE, 349 (6250), 819-822, DOI: 10.1126/science.aaa.9092, 2015



Henrik Skov

Prof. Dr.
DENMARK

Professor, Scientific
head of Villum Research
Station, Station Nord
Department of
Environmental Science,
Aarhus University

Date of election: 13 September 2017

Scientific Field

Arctic Atmospheric Chemistry

Researcher ID:

ORCID ID: 0000-0003-1167-8696

ISI Web of Science 11 June 2020

No. of articles..... 109

H index..... 35

Total citations..... 3,390

No. of Nature and

Science papers..... 1

Major 5 Publications

1. Skov H, Hjorth J. Nordstrøm, C. Jensen, B. Christoffersen, C. Poulsen, M.B. Liisberg, J.B. and Dall'Osto M. (2019). The variability in Gaseous Elemental Mercury at Villum Research Station, Station Nord in North Greenland from 1999 to 2017. ACPD, DOI:10.5194/acp-2019-912
2. Lange, R. Dall'Osto M. Wex, H. Skov, H. & Massling, A. (2019). Large summer contribution of organic biogenic aerosols to Arctic cloud condensation nuclei. Geophysical Research Letters, 46, DOI:10.1029/2019GL084142
3. Dall'Osto, M. Beddows, D. C. S. Tunved, P. Harrison, R. M. Lupi, R. Vitale, V. Becagli, S. Traversi, R. Park, K. T. Yoon, Y. J. Massling, A. Skov, H. Ström, J. Krejci, R. (2019) Simultaneous aerosol size distributions and chemical composition in the European high Arctic, ACP. 19, 11 Pages: 7377-7395. DOI: 10.5194/acp-19-7377-2019
4. Nielsen, I.E. Skov, H. Christensen, J.H. Massling, A. Eriksson, A.C. Junninen, H. Sipilä, M. Sarnela, N. Peräkylä, O. Zhang, Q. Cappa, C.D. and Nøjgaard, J.K. (2019) Biogenic and anthropogenic sources of aerosols at the High Arctic site Villum Research Station. Atmos. Chem. Phys. Volume: 19 Issue: 15. DOI:10.5194/acp-2019-130
5. Kamp, J. Skov, H. Jensen, B. and Sørensen, S.S. (2018) Fluxes of Gaseous Elemental Mercury (GEM) in High Arctic during Atmospheric Mercury Depletion Events (AMDEs). ACP. Vol. 18, 6923-6938. DOI:10.5194/acp-18-6923-2018

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Petteri Taalas

Prof. Dr.

FINLAND/SWITZERLAND

Secretary General,
World Meteorological
Organisation (WMO);
Finnish Meteorological
Institute (FMI)

Date of election: 24 June 2013

Scientific Field

Satellite Technology, Global Change, Climate & Atmospheric Chemistry

Highlight of memberships/honours received

- Petteri Taalas represented Finland at the Intergovernmental Panel on Climate Change (IPCC), leading the national IPCC group. He has also been a member of government panels on Arctic, space and climate matters.
- He is a member of Science and Technology Academies, an honorary Member of China Meteorological Association, a Member of Eurasian Academy and an honorary doctor of TERI University in India and University of Eastern Finland.
- He has received Commanders Cross from the president of Finland, Big German Commanders cross, Commander of Honour of Greece as well as first class military, Border Guard and Civil Protection of Finland and first class medal of Estonia on hydrometeorology.
- He was the alumni of the year of Helsinki University in 2012.

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Ilya Usoskin

Knight (1st class) of the Order of Lion of Finland
Finnish Academy of Sciences and Letters, member
Recipient Julis Bartels medal of EGU (2018)
FINLAND

Professor, Head of Oulu
cosmic-ray station at
University of Oulu

Date of election: 15 November 2017

Scientific Field

Space Physics, Cosmic rays, Solar-Terrestrial relations

SCOPUS ID: 7004683817

Researcher ID: E-5089-2014

ORCID ID: 0000-0001-8227-9081

ISI Web of Science 26 May 2020

No. of articles..... 391

H index..... 50

Total citations..... 9,645

No. of Nature and

Science papers..... 3

Major 5 Publications

1. Usoskin, I.G., S. Solanki, M. Schuessler, K. Mursula, K. Alanko, A millennium scale sunspot number reconstruction: Evidence for an unusually active sun since the 1940's, *Phys. Rev. Lett.*, 91(21), 211101, 2003.
2. Solanki, S.K., I.G. Usoskin, B. Kromer, M. Schuessler and J. Beer, An unusually active Sun during recent decades compared to the previous 11,000 years, *Nature*, 431, 1084-1087, 2004
3. Usoskin, I.G., K. Alanko-Huotari, G.A. Kovaltsov, K. Mursula, Heliospheric modulation of cosmic rays: Monthly reconstruction for 1951-2004, *J. Geophys. Res.*, 110(A12), CiteID A12108, 2005.
4. Usoskin, I.G., G.A. Kovaltsov, Cosmic ray induced ionization in the atmosphere: Full modeling and practical applications, *J. Geophys. Res.*, 111, D21206, 2006.
5. Miyake, F., I. Usoskin, S. Poluianov (eds), *Extreme Solar Particle Storms: the hostile Sun*, IOP Publ., Bristol UK, 2019, doi: 10.1088/2514-3433/ab404a

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Bas van de Wiel

ANTONI VAN LEEUWENHOEK PROFESSOR
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Professor, Delft
University of Technology

Date of election: 09 February 2018

Scientific Field

Atmospheric Research, Meteorology and Atmospheric Sciences,
Stably Stratified flows, Atmosphere-surface interactions, Environ-
mental Fluid Mechanics, Boundary layer meteorology

SCOPUS ID: 6602612066

SCOPUS 30 May 2020

No. of articles..... 59

H index..... 20

Total citations..... 1,479

No. of Nature and

Science papers.....

Major 5 Publications

1. Van de Wiel BJH, Vignon E, Baas P, et al: Regime transition in near-surface temperature inversions: a conceptual model., J. Atmos. Sci., DOI: 10.1175/JAS-D-16-0180.1, 2017
2. Van Hooft JA., Popinet S., van Heerwaarden CC, van der Linden, SJA, de Roode, SR & van de Wiel, BJH, 2018, : Towards Adaptive Grids for Atmospheric Boundary-Layer Simulations, Bound.-Layer Meteor., DOI:10.1007/s10546-018-0335-9.
3. Van Hooijdonk IGS, Donda JMM, Clercx HJH, Bosveld FC, and van de Wiel BJH, (2015) Shear capacity as prognostic of nocturnal boundary layer regimes. J. Atmos. Sci., DOI: 10.1175/JAS-D-14-0140.1
4. Van de Wiel BJH, Moene AF, Steeneveld GJ, Baas P., Bosveld, FC, and Holtslag AAM, 2010. A conceptual view on inertial oscillations and nocturnal low-level jets. ., J. Atmos. Sci., DOI: 10.1175/2010JAS3289.1
5. Vignon E, van de Wiel BJH, van Hooijdonk IGS, et al: Stable Boundary Layer regimes at Dome C, Antarctica. Quart. J. Roy. Meteor. Soc., DOI: 10.1002/qj.2998, 2017

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Timo Vesala

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FINLAND

Institute of Atmospheric
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Research (INAR) at the
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Date of election: 24 June 2013

Scientific Field

Biogeochemical Cycles, Meteorology & Atmospheric Science,
Environmental Sciences & Ecology, Forestry

Researcher ID: C-3795-2017

ORCID ID: 0000-0002-4852-7464

ISI Web of Science 14 May 2020

No. of articles..... 327

H index..... 69

Total citations..... 24,827

No. of Nature and

Science papers..... 4

Major 5 Publications

1. Peltola O, Vesala T, Gao Y et al: Monthly Gridded Data Product of Northern Wetland Methane Emissions Based on Upscaling Eddy Covariance Observations. *Earth Syst. Sci. Data* 11, 1263-1289, 2019
2. Franz D, Acosta M, Altimir N, ... Vesala T: Towards long-term standardised carbon and greenhouse gas observations for monitoring Europe's terrestrial ecosystems: a review. *International Agrophysics* 32, 10.1515/intag-2017-0039, 2018
3. Pulliainen J, Aurela M, Laurila T, ... Vesala T: Early snowmelt significantly enhances boreal springtime carbon uptake. *PNAS*, www.pnas.org/cgi/doi/10.1073/pnas.1707889114, 2017
4. Dewar R, Mauranen M, Mäkelä A, Hölttä T, Medlyn B and Vesala T: New insights into the covariation of stomatal, mesophyll and hydraulic conductances from optimization models incorporating non-stomatal limitations to photosynthesis. *New Phytologist*, doi:10.1111/nph.14848, 2017
5. Vesala T, Sevanto S, Grönholm T, Salmon Y, Nikinmaa E, Hari P and Hölttä T: Effect of leaf water potential on internal humidity and CO₂ dissolution: Reverse transpiration and improved water use efficiency under negative pressure. *Frontiers in Plant Science*, doi: 10.3389/fpls.2017.00054, 2017

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Yrjö Viisanen

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FINLAND

Finnish Meteorological
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Date of election: 24 June 2013

Scientific Field

Ecosystem Atmosphere Interactions

Researcher ID:

ORCID ID:

ISI Web of Science 10 July 2020

No. of articles..... 130

H index..... 39

Total citations..... 6,347

No. of Nature and

Science papers.....

Major 5 Publications

1. Kirkby J, Curtius J, Almeida J, et al: Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation, NATURE, 476, 7361, 429-U77, DOI:10.1038/nature10343, 2011
2. Almeida J, Schobesberger S, Kurten A, et al: Molecular understanding of sulphuric acid-amine particle nucleation in the atmosphere, NATURE, 502, 7471, 359-DOI: 10.1038/nature12663, 2013
3. Tunved P, Hansson HC, Kerminen VM: High natural aerosol loading over boreal forests, SCIENCE, 312, 5771, 261-263, DOI: 10.1126/science.1123052, 2006
4. Viisanen Y, Strey R, Reiss H: Homogeneous nucleation rates for water, JOURNAL OF CHEMICAL PHYSICS, 99, 6, 4680-4692, DOI: 10.1063/1.466066, 1993
5. Kulmala M, Hameri K, Aalto P, et al: Overview of the international project on biogenic aerosol formation in the boreal forest (BIOFOR), TELLUS SERIES B-CHEMICAL AND PHYSICAL METEOROLOGY, 53, 4, 324-343, DOI: 10.1034/j.1600-0889.2001.doi-24.x, 2001

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Vito Vitale

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Date of election: 21 May 2021

Scientific Field

Atmospheric research, radiative transfer processes, aerosols, radiation and energy budget, atmospheric composition changes and climate

Researcher ID: AAW-8441-2021

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GoogleScholar/ISI Web of Science (8 July 2021)

No. of articles..... 176/84

H index..... 25/18

Total citations..... 2,043/1,251

i10-index: 54

No. of Nature and Science
papers.....

Major 5 Publications

1. Bromwich DH, Werner K, Casati B, et al: The Year of Polar Prediction in the Southern Hemisphere (YOPP-SH), BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY, vol. 101, pp. E1653–E1676, doi: 10.1175/BAMS-D-19-0255.1, 2020
2. Ferrero L, Ritter C, Cappelletti D, et al.: Aerosol optical properties in the Arctic: The role of aerosol chemistry and dust composition in a closure experiment between Lidar and tethered balloon vertical profiles, SCIENCE OF THE TOTAL ENVIRONMENT, vol. 686, pp. 452–467, doi: 10.1016/j.scitotenv.2019.05.399, 2019
3. Tomasi C, Kokhanovsky AA, Lupi A, et al: Aerosol remote sensing in polar regions. EARTH-SCIENCE REVIEWS, vol. 140, pp.108–157, ISSN: 0012-8252, doi: 10.1016/j.earscirev.2014.11.001, 2015
4. Petkov B, Vitale V, Tomasi C, et al: Response of the ozone column over Europe to the 2011 Arctic ozone depletion event according to ground-based observations and assessment of the consequent variations in surface UV irradiance. ATMOSPHERIC ENVIRONMENT, vol. 85, pp. 169–178, ISSN: 1352-2310, 2014
5. Järvinen E, Virkkula A, Nieminen T, et al: Seasonal cycle and modal structure of particle number size distribution at Dome C, Antarctica. ATMOSPHERIC CHEMISTRY AND PHYSICS, vol. 13, pp. 7473–7487, doi: 10.5194/acp-13-7473-2013



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Prof. Dr.
SWEDEN

Professor, Stockholm
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Date of election: 19 September 2019

Scientific Field
Risk Analysis

Researcher ID: I-6230-2012
ORCID ID:

ISI Web of Science 2019
No. of articles..... 150
H index..... 44
Total citations..... 6648
No. of Nature and
Science papers.....

Major 5 Publications

1. Wu D, Zhang B, Baron O: A Trade Credit Model with Asymmetric Competing Retailers. Accepted. Production and Operations Management, 2018
2. Zhang B, Wu D, Liang L: Trade credit model with customer balking and asymmetric market information. Transportation Research Part E: Logistics and Transportation Review, 110, 31-46, 2018
3. Ding S, Li Y, Wu D, et al: Time-aware cloud service recommendation using similarity-enhanced collaborative filtering and ARIMA. Decision Support Systems. DOI: 10.1016/j.dss.2017.12.012, 2018
4. Ben-Ammar O, Dolgui A, Wu D: Planned lead times optimization for multi-level assembly systems under uncertainties. Omega. DOI: 10.1016/j.omega.2017.11.004, 2017
5. Pan Y, Wu D: A Novel Recommendation Model for Online-to-Offline Service Based on the Customer Network and Service Location. Journal of Management Information Systems 37 (2), 563-593, 2020

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Yong Xue

Prof. Dr.; Chartered Physicist
UNITED KINGDOM

Professor in
Computation
College of Engineering
and Technology,
University of Derby

Date of election: 19 September 2019

Scientific Field

Quantitative Remote Sensing (Aerosol, Energy Exchange at the boundary layer), Geocomputation, Big Earth Data

Researcher ID:

ORCID ID: 0000-0003-3091-6637

ISI Web of Science 30 May 2020

No. of articles..... 283

H index..... 25

Total citations..... 2,442

No. of Nature and
Science papers.....

Major 5 Publications

1. Yanqing Xie; Yong Xue; Jie Guang; Linlu Mei; Lu She; Ying Li; Yahui Che; Cheng Fan, 2020, Deriving a Global and Hourly Data Set of Aerosol Optical Depth Over Land Using Data from Four Geostationary Satellites: GOES-16, MSG-1, MSG-4, and Himawari-8. IEEE Transactions on Geoscience and Remote Sensing. Vol. 58, Issue 3, March 2020, pp.1538-1549. (DOI: 10.1109/TGRS.2019.2944949)
2. Yong Xue, Xingwei He, Gerrit de Leeuw, Linlu Mei, Yahui Che, Wayne Rippin, Jie Guang, Yincui Hu, 2017, Long-time series aerosol optical depth retrieval from AVHRR data over land in North China and Central Europe. Remote Sensing of Environment, Vol. 198, Pages 471-489. (DOI:10.1016/j.rse.2017.06.036)
3. Yong Xue, Xingwei He, Hui Xu, Jie Guang, Jianping Guo, and Linlu Mei, 2014, CHINA COLLECTION 2.0: The Aerosol Optical Depth Dataset from the Synergetic Retrieval of Aerosol Properties Algorithm. Atmospheric Environment, Volume 95, Pages 45-58. (DOI: 10.1016/j.atmosenv.2014.06.019)
4. Chi Li, Yong Xue, Quanhua Liu, Jie Guang, Xingwei He, Jiahua Zhang, Tingkai Wang, Xinjie Liu, 2014, Post Calibration of Channels 1 and 2 of Long-term AVHRR Data Record Based on SeaWiFS Data and Pseudo-invariant Targets. Remote Sensing of Environment, Vol. 150, Pages 104-119. (DOI: 10.1016/j.rse.2014.04.020).
5. Xue, Y. and Cracknell, A. P., 1995, Advanced Thermal Inertia Modeling. International Journal of Remote Sensing, 16(3), 431-446. (DOI:10.1080/01431169508954411)

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Sergej Zilitinkevich[†]

Prof. , Dr.

FINLAND

[†]Deceased

Date of election: 24 June 2013

Finnish Meteorological
Institute (FMI)
Institute of Atmospheric
and Earth System
Research (INAR) at the
University of Helsinki

Sergej Zilitinkevich: international scientist, winner of many awards, and leader of numerous international research projects that produced many outstanding contributions to the physics of atmospheric turbulence and of planetary boundary layer (PBL) processes and structures.

Sergej's research was honoured with many international prizes and awards, including the Vilhelm Bjerknes (2000) and Alfred Wegener (2015) medals of the European Geophysical Union, as well as the prestigious IMO Prize (2019) for outstanding contributions to meteorology, climatology, and related fields (<https://public.wmo.int/en/media/news/sergej-zilitinkevich-named-imo-prize-laureate>).

For more than half a century his work was pioneering in both theoretical developments and practical applications that responded to vital needs in weather forecasting, air-quality prediction, and climate modelling. He published more than 200 papers and nine books on PBLs, air-sea interactions, environmental turbulence, the general circulations of the Earth, planetary atmospheres, climate theory, and the physical aspects of modelling water ecosystems. His first book, *Dynamics of the Atmospheric Boundary Layer*, published in 1970 has withstood the passage of time and contains many ideas that still remain innovative today.

Sergej was an excellent mentor and a prodigious generator of novel ideas for his students. He supervised more than 20 Ph.D. students from many countries, some of whom became his collaborators for many years and who have co-authored many of his publications.

He made many valuable contributions to the Russian-Finnish-EU collaboration in meteorology. Beginning in 2012, he was a Chief Scientist of the International Pan-Eurasian Experiment (<http://www.atm.helsinki.fi/peex/>), a scientific programme that involved research groups from Western Europe, Russia, China, and Japan, and which focused on climate change and global pollution.

Sergej Zilitinkevich will be greatly missed by his many friends and colleagues in Russia, the EU, and America. They will remember his extraordinary intellectual abilities, his dry wit, and above all his never wavering generous kindness and friendship. He is truly a generational "one of a kind."



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